

What is claimed is:

1. An implant to reshape a heart valve annulus comprising a body sized and configured to rest near or within a heart valve annulus, including a portion
5 of the body contacting and outwardly displacing tissue to reshape the heart valve annulus.

2. An implant to reshape a heart valve annulus comprising a body sized and configured to rest in net compression near or within a heart valve annulus,
10 including a portion of the body contacting tissue to displace tissue to reshape the heart valve annulus.

3. An implant to reshape a heart valve annulus comprising
a body sized and configured to rest in net
15 compression near or within a heart valve annulus, and
spaced-apart struts appended to the body to contact tissue near or within the heart valve annulus, the struts being sized and configured to displace tissue as a result of the net compression to reshape the heart
20 valve annulus.

4. An implant to reshape a heart valve having an annulus and leaflet commissures comprising
a body sized and configured to rest in net
compression near or within a heart valve annulus, and
25 spaced-apart struts appended to the body to contact tissue at or near the leaflet commissures, the struts being sized and configured to displace tissue as a result of the net compression to reshape the heart valve annulus.

5. An implant to reshape a heart valve annulus comprising
a body sized and configured to rest in net
compression near or within a heart valve annulus, and
spaced-apart struts appended to the body to
35 contact tissue near or within the heart valve annulus,

the struts being sized and configured to apply tension to tissue as a result of the compression of the body to reshape the heart valve annulus.

6. An implant to reshape a heart valve
5 having an annulus and leaflet commissures comprising
a body sized and configured to rest in net
compression near or within the heart valve annulus, and
spaced-apart struts appended to the body to
contact tissue at or near the leaflet commissures, the
10 structures being sized and configured to apply tension to
tissue at or near the leaflet commissures as a result of
the compression of the body to shape and tension the
heart valve annulus for leaflet coaptation.

7. An implant according to claim 1 or 2 or 3
15 or 4 or 5 or 6
wherein the body comprises an annular shape.

8. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6
wherein the body comprises a closed annular
20 shape.

9. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6
wherein the body comprises an open annular
shape.

25 10. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6
wherein the body comprises at least one rail.

11. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6
30 wherein the body comprises a wire-form
structure.

12. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6
wherein the body is collapsible for placement
35 within a catheter.

13. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6

wherein the body includes at least one cusp
sized and configured to permit folding of the body
5 without permanent deformation.

14. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6

wherein the body carries a tissue in-growth
material.

10 15. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6

further including at least one structure
appended to the body and being sized and configured to
contact tissue at, above, or below the heart valve
15 annulus to stabilize the body.

16. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6

wherein the body is sized and configured to
extend close to the annulus.

20 17. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6

wherein the body is sized and configured to
extend above the annulus.

25 18. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6

wherein the body is sized and configured to
contact tissue above the annulus.

19. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6

30 wherein the body is sized and configured to
include one portion that extends close to the annulus and
another portion that extends above the annulus.

20. An implant according to claim 1 or 2 or 3
or 4 or 5 or 6

35 wherein the body is sized and configured to

include one portion that extends close to the annulus and another portion that contacts tissue above the annulus.

21. An implant according to claim 1 or 2 or 3 or 4 or 5 or 6

5 wherein the body comprises an elastic material.

22. An implant according to claim 1 or 2 or 3 or 4 or 5 or 6

10 wherein the body comprises a plastically deformable material.

23. An implant according to claim 1 or 2 or 3 or 4 or 5 or 6

wherein the body comprises a superelastic material.

15 24. An implant according to claim 1 or 2 or 3 or 4 or 5 or 6

and further including a retaining element appended to the body and extending over at least a portion of a native heart valve leaflet, the restraining
20 element being shaped to restrain retrograde movement of the heart valve leaflet.

25. An implant according to claim 1 or 2 or 3 or 4 or 5 or 6

25 and further including a neoleaflet element appended to the body and occupying the space of at least one native heart valve leaflet, the neoleaflet element being shaped to provide a one-way valve function.

26. An implant according to claim 1 or 2 or 3 or 4 or 5 or 6

30 and further including a second heart valve treatment element appended to the body to affect a heart valve function.

27. An implant according to claim 26

35 wherein the second heart valve treatment element includes means for supplementing, repairing, or

replacing a native heart valve leaflet.

28. An implant according to claim 26
wherein the second heart valve treatment
element includes means for retaining a native heart valve
5 leaflet.

29. An implant according to claim 3 or 4 or 5
or 6
wherein at least one of the struts comprises a
wire-form structure.

10 30. An implant according to claim 3 or 4 or 5
or 6
wherein the body and the struts each comprises
a wire-form structure.

31. An implant according to claim 3 or 4 or 5
15 or 6
wherein at least one of the struts is
collapsible onto the body.

32. An implant according to claim 3 or 4 or 5
or 6
20 wherein at least one of the struts carries a
tissue in-growth material.

33. An implant according to claim 3 or 4 or 5
or 6
wherein at least one of the struts carries a
25 structure sized and configured to increase a surface area
of contact with tissue at, above, or below the annulus.

34. A method for reshaping a heart valve
annulus comprising the steps of
introducing an implant as defined in claim 1
30 or 2 or 3 or 4 into a heart, and
displacing tissue to reshape the heart valve
annulus by locating the body of the implant as defined in
claim 1 or 2 or 3 or 4 near or within a heart valve
annulus.

35 35. A method according to claim 34

wherein the introducing step comprises using an open heart surgical procedure.

36. A method according to claim 34

5 wherein the introducing step comprises using a surgical procedure in which the implant is carried within a catheter.

37. A method according to claim 34

wherein the introducing step comprises using an intravascular surgical procedure.

10 38. A method according to claim 34

wherein the displacing tissue step comprises tethering the body of the implant as defined in claim 1 or 2 or 3 or 4 to at least one wire while locating the body near or within a heart valve annulus.

15 39. A method for reshaping a heart valve annulus comprising the steps of

introducing an implant as defined in claim 5 into a heart, and

20 applying tension to reshape the heart valve annulus by locating the body of the implant as defined in claim 5 in net compression at or near a heart valve annulus with the struts in contact with and applying tension to tissue near or within the heart valve annulus.

25 40. A method for reshaping a heart valve having an annulus and leaflet commissures comprising the steps of

introducing an implant as defined in claim 6 into a heart, and

30 applying tension to shape and tension the heart valve annulus for leaflet coaptation by locating the body of the implant as defined in claim 6 in net compression at or near the leaflet commissures with the struts in contact with and applying tension to tissue at or near the leaflet commissures.

35 41. A method according to claim 39 or 40

wherein the introducing step comprises using an open heart surgical procedure.

42. A method according to claim 39 or 40 wherein the introducing step comprises using a surgical procedure in which the implant is carried within a catheter.

43. A method according to claim 39 or 40 wherein the introducing step comprises using an intravascular surgical procedure.

44. A method according to claim 39 or 40 wherein the applying tension step comprises tethering the body of the implant as defined in claim 5 or 6, respectively, to at least one wire while locating the body in compression at or near a heart valve annulus.